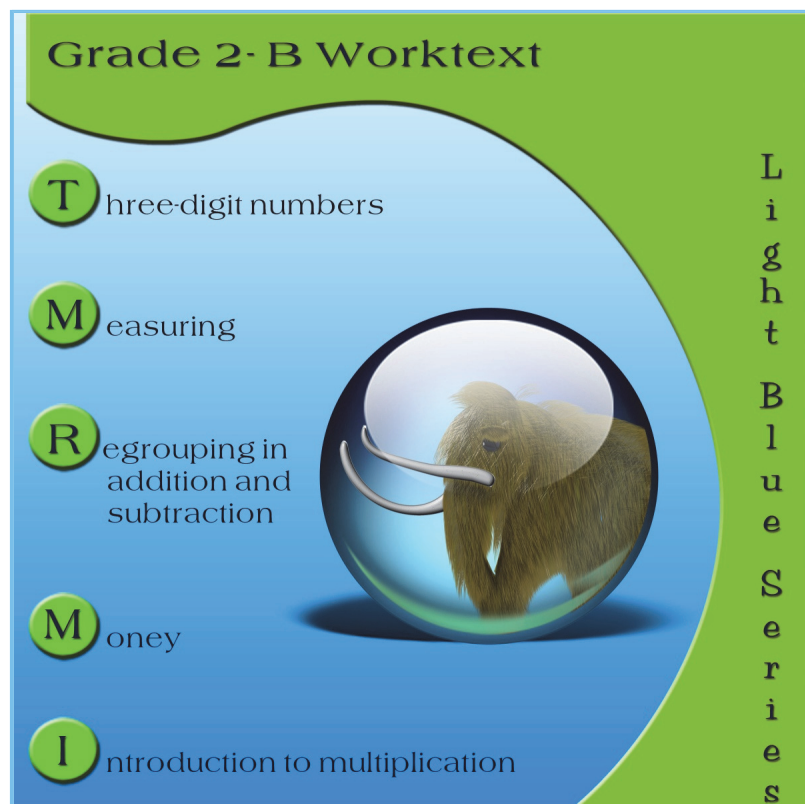


Math Mammoth

Grade 2-B Worktext



By Maria Miller

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Foreword

Math Mammoth Grade 2 comprises a complete math curriculum for the second grade mathematics studies. The curriculum meets and exceeds the Common Core standards.

The main areas of study for second grade are:

1. Understanding of the base-ten system within 1000. This includes place value with three-digit numbers, skip-counting in fives, tens, and multiples of hundreds, tens, and ones (within 1000) (chapters 6 and 8);
2. Develop fluency with addition and subtraction, including solving word problems, regrouping in addition, and regrouping in subtraction (chapters 1, 3, 4, and 8);
3. Using standard units of measure (chapter 7);
4. Describing and analyzing shapes (chapter 5).

Additional topics we study are time, money, introduction to multiplication, and bar graphs and picture graphs.

This book, 2-B, covers three-digit numbers (chapter 6), measuring (chapter 7), regrouping in addition and subtraction (chapter 8), counting coins (chapter 9), and an introduction to multiplication (chapter 10). The rest of the topics are covered in the 2-A student worktext.

Some important points to keep in mind when using the curriculum:

- These two books (parts A and B) are like a “framework”, but you still have a lot of liberty in planning your child’s studies. While addition and subtraction topics are best studied in the order they are presented, feel free to go through the sections on shapes, measurement, clock, and money in any order you like.

This is especially advisable if your child is either “stuck” or is perhaps getting bored with some particular topic. Sometimes the concept the child was stuck on can become clear after a break from the topic.

- Math Mammoth is mastery-based, which means it concentrates on a few major topics at a time, in order to study them in depth. However, you can still use it in a *spiral* manner, if you prefer. Simply have your child study in 2-3 chapters simultaneously. This type of flexible use of the curriculum enables you to truly individualize the instruction for your child.
- Don’t automatically assign all the exercises. Use your judgment, trying to assign just enough for your child’s needs. You can use the skipped exercises later for review. For most children, I recommend to start out by assigning about half of the available exercises. Adjust as necessary.
- For review, the curriculum includes a worksheet maker (Internet access required), mixed review lessons, additional cumulative review lessons, and the word problems continually require usage of past concepts. Please see more information about review (and other topics) in the FAQ at <https://www.mathmammoth.com/faq-lightblue.php>

I heartily recommend that you view the full user guide for your grade level, available at <https://www.mathmammoth.com/userguides/>

Lastly, you can find free videos matched to the curriculum at <https://www.mathmammoth.com/videos/>

I wish you success in teaching math!

Maria Miller, the author

Chapter 6: Three-Digit Numbers

Introduction

This sixth chapter of *Math Mammoth Grade 2* deals with numbers up to one thousand.

The first three lessons provide the basis for understanding three-digit numbers and place value. The lessons use a visual model of hundred-flats, ten-pillars, and one-cubes. If you prefer, you can use manipulatives instead (base ten blocks). We also study three-digit numbers on a number line, and in the following lesson, *Forming Numbers—and Breaking Them Apart*, children practice writing numbers in expanded form (as a sum of their “parts”: hundreds, tens, and ones).

Next, it is time to study *Skip-Counting by Tens*, and soon also by twos and fives. Then we compare and order three-digit numbers.

After this, it is time for some mental math. First, we study *Adding and Subtracting Whole Hundreds* mentally. Children practice completing the next hundred (e.g. $260 + \underline{\quad} = 300$) and add and subtract whole tens mentally. Along the way, they also solve word problems and other types of problems.



The chapter ends with some bar graphs and pictographs, which provide a nice application for the recently learned three-digit numbers.

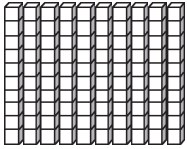
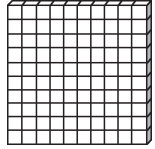
I also want to include a friendly reminder here concerning the free videos matching the curriculum at <https://www.mathmammoth.com/videos/> (choose 2nd grade). Also, don’t automatically assign all the problems and exercises, but use your judgment. Many children can learn these topics perfectly fine by doing about half of the exercises.

The Lessons

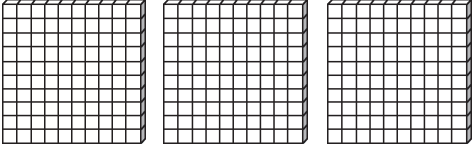
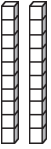

	page	span
Three-Digit Numbers	10	4 pages
Hundreds on the Number Line	14	2 pages
Forming Numbers—and Breaking Them Apart	16	2 pages
Skip-Counting by Tens	18	3 pages
More Skip-Counting	21	2 pages
Which Number Is Greater?	23	3 pages
Comparing Numbers and Some Review	26	3 pages
Add and Subtract Whole Hundreds	29	2 pages
Practice with Whole Hundreds	31	3 pages
Completing the Next Hundred	34	3 pages
Adding Whole Tens	37	3 pages
Subtract Whole Tens	40	3 pages
Patterns and Problems	43	3 pages
Bar Graphs and Pictographs	46	4 pages
Mixed Review Chapter 6	50	2 pages
Review Chapter 6	52	3 pages

Three-Digit Numbers

Ten ones make a ten:  = 
 10 ones = 10

Ten ten-pillars make ONE HUNDRED:  = 
 10 tens = 100

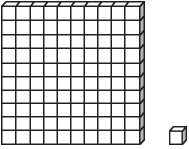
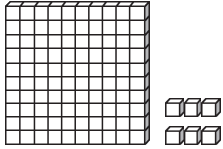
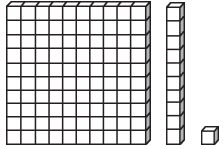
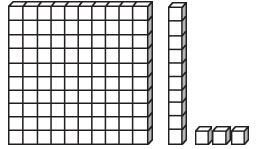
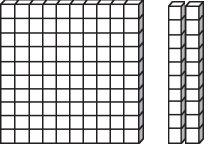
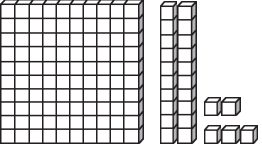
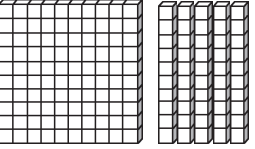
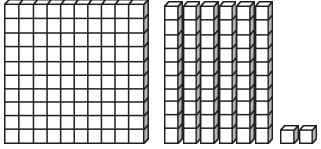
Write hundreds, tens, and ones in their own columns:

   =

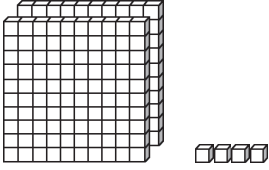
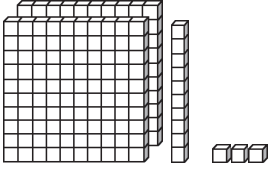
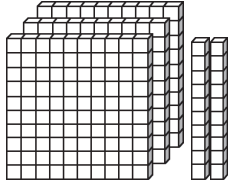
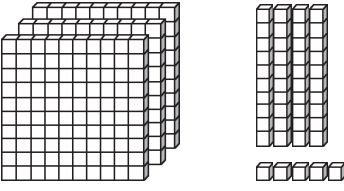
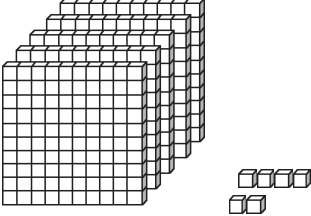
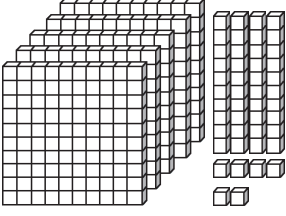
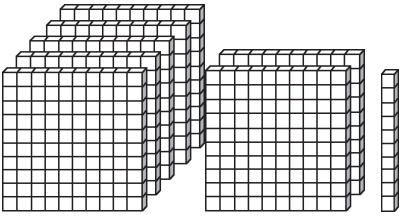
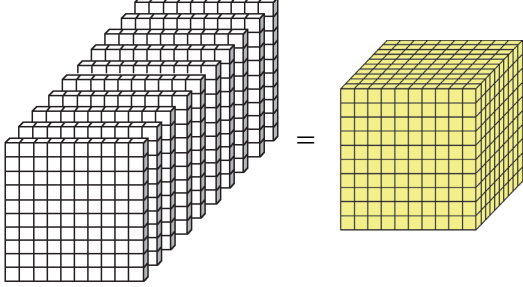
hundreds	tens	ones
3	2	7

 three hundred twenty-seven

1. Count the ones, tens, and hundreds, and fill in the missing parts.

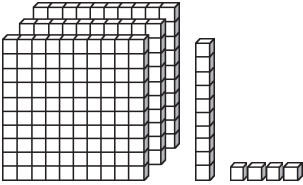
<p>a. one hundred one</p>  <p>hundreds tens ones</p> <table border="1" data-bbox="207 1335 451 1409"> <tr> <td>1</td> <td>0</td> <td>1</td> </tr> </table>	1	0	1	<p>b. one hundred six</p>  <p>hundreds tens ones</p> <table border="1" data-bbox="532 1335 776 1409"> <tr> <td></td> <td></td> <td></td> </tr> </table>				<p>c. one hundred eleven</p>  <p>hundreds tens ones</p> <table border="1" data-bbox="857 1335 1101 1409"> <tr> <td>1</td> <td>1</td> <td>1</td> </tr> </table>	1	1	1	<p>d. one hundred thirteen</p>  <p>hundreds tens ones</p> <table border="1" data-bbox="1182 1335 1458 1409"> <tr> <td></td> <td></td> <td></td> </tr> </table>			
1	0	1													
1	1	1													
<p>e. one hundred twenty</p>  <p>hundreds tens ones</p> <table border="1" data-bbox="207 1801 451 1875"> <tr> <td></td> <td></td> <td></td> </tr> </table>				<p>f. one hundred twenty-five</p>  <p>hundreds tens ones</p> <table border="1" data-bbox="532 1801 776 1875"> <tr> <td></td> <td></td> <td></td> </tr> </table>				<p>g. one hundred fifty</p>  <p>hundreds tens ones</p> <table border="1" data-bbox="857 1801 1101 1875"> <tr> <td></td> <td></td> <td></td> </tr> </table>				<p>h. one hundred sixty-two</p>  <p>hundreds tens ones</p> <table border="1" data-bbox="1182 1801 1458 1875"> <tr> <td></td> <td></td> <td></td> </tr> </table>			

2. Count the ones, tens, and hundreds, and fill in the missing parts.

<p>a. <u>two hundred</u></p> <p><u>four</u></p>  <p>hundreds tens ones</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%;">2</td> <td style="width: 33%;">0</td> <td style="width: 33%;">4</td> </tr> </table>	2	0	4	<p>b. <u>two hundred</u></p> <p><u>thirteen</u></p>  <p>hundreds tens ones</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%; height: 30px;"> </td> <td style="width: 33%;"> </td> <td style="width: 33%;"> </td> </tr> </table>				<p>c. _____</p> <p>_____</p>  <p>hundreds tens ones</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%; height: 30px;"> </td> <td style="width: 33%;"> </td> <td style="width: 33%;"> </td> </tr> </table>			
2	0	4									
<p>d. _____</p> <p>_____</p>  <p>H T O</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%; height: 30px;"> </td> <td style="width: 33%;"> </td> <td style="width: 33%;"> </td> </tr> </table>				<p>e. _____</p> <p>_____</p>  <p>H T O</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%; height: 30px;"> </td> <td style="width: 33%;"> </td> <td style="width: 33%;"> </td> </tr> </table>				<p>f. _____</p> <p>_____</p>  <p>H T O</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%; height: 30px;"> </td> <td style="width: 33%;"> </td> <td style="width: 33%;"> </td> </tr> </table>			
<p>g. _____</p>  <p>H T O</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%; height: 30px;"> </td> <td style="width: 33%;"> </td> <td style="width: 33%;"> </td> </tr> </table>				<p>h. <u>Ten hundreds = One thousand</u></p>  <p>Th H T O</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 25%;">1</td> <td style="width: 25%;">0</td> <td style="width: 25%;">0</td> <td style="width: 25%;">0</td> </tr> </table>	1	0	0	0			
1	0	0	0								

3. Write a sum of the hundreds, tens, and ones shown in the picture.
Also write the number.

a.

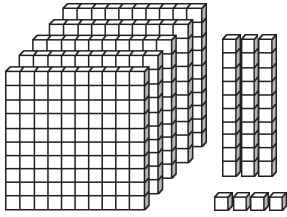


_____ + _____ + _____

H T O

--	--	--

b.

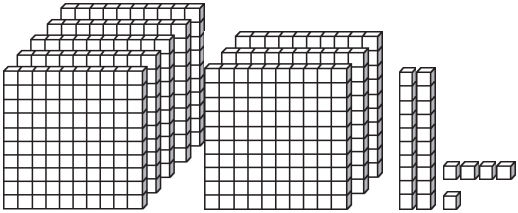


_____ + _____ + _____

H T O

--	--	--

c.

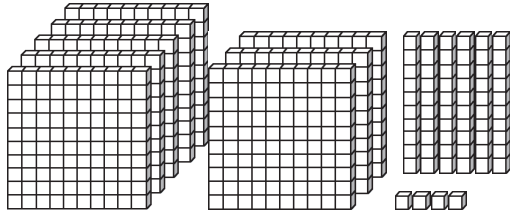


_____ + _____ + _____

H T O

--	--	--

d.



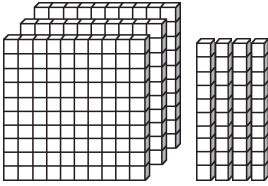
_____ + _____ + _____

H T O

--	--	--

Notice: There are NO ones.
Write a zero for ones in the sum.

e.



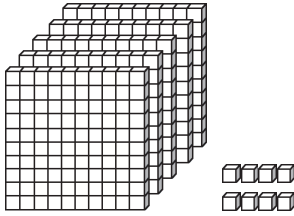
_____ + _____ + 0

H T O

--	--	--

Notice: There are NO tens.
Write a zero for tens in the sum.

f.



_____ + 0 + _____

H T O

--	--	--

4. Match the numbers, number names, and the sums to the correct pictures.

118	505	818	550	508	805
eight hundred five	five hundred fifty	one hundred eighteen			
$500 + 8$	$500 + 5$	$800 + 10 + 8$			

5. The dots are ones, the pillars are tens. Group together 10 ten-pillars to make a hundred.

<p>a. </p> <p style="text-align: center;"><u>235</u></p>	<p>b. </p> <p style="text-align: center;">_____</p>
<p>c. </p> <p style="text-align: center;">_____</p>	<p>d. </p> <p style="text-align: center;">_____</p>

How many tens are in a thousand?

Hundreds on the Number Line

1. Use the number lines to help. What number is...

a. one more than 118? _____

b. ten more than 108? _____

one more than 134? _____

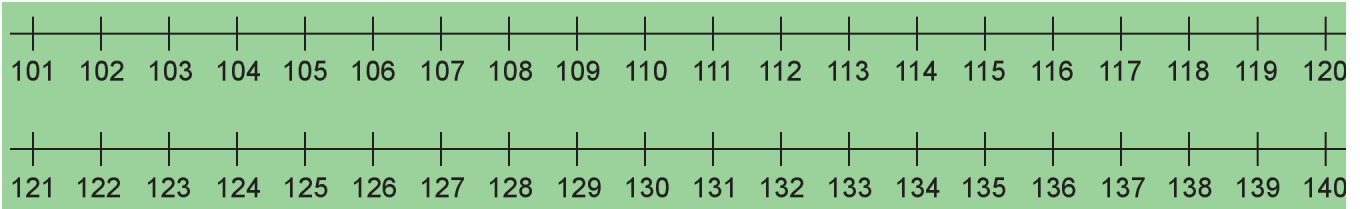
ten more than 125? _____

one less than 103? _____

ten less than 140? _____

one less than 130? _____

ten less than 127? _____



c. two more than 193? _____

d. ten more than 164? _____

two more than 178? _____

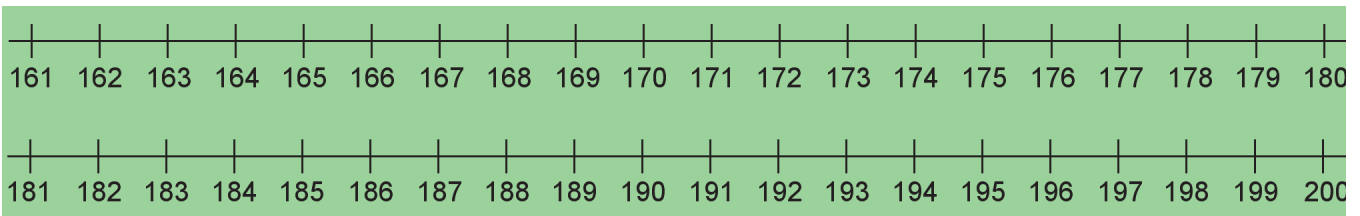
ten more than 188? _____

two less than 170? _____

ten less than 200? _____

two less than 190? _____

ten less than 177? _____



2. Find the differences.

<p>a. The difference of 165 and 171</p> <p>_____</p>	<p>b. The difference of 185 and 192</p> <p>_____</p>
<p>c. The difference of 200 and 191</p> <p>_____</p>	<p>d. The difference of 140 and 124</p> <p>_____</p>